FOLDABLE TABLETOP EASEL

FIELD OF THE INVENTION

This invention is in the field of devices for holding and displaying display items such as posters and books, and, in particular, is in the field of easels.

BACKGROUND OF THE INVENTION

Various devices are disclosed in the prior art for holding and displaying posters, works of art, photos, business charts, books and other display items for presentations, exhibitions and other purposes. Floor or table standing easels, commonly constructed of tubular and other structural components which may be of metal, plastic or other materials, or combinations thereof, have long been used for such applications. These devices are relatively expensive, bulky, heavy and not particularly easy to use.

A number of devices are also disclosed in the prior art which attempt to provide a less expensive, lighter, and less bulky means for holding and displaying such items. A number of such devices, particularly tabletop easels, have been designed to be constructed principally of corrugated paperboard or other types of cardboard or other lightweight, inexpensive materials and some have been designed to be more or less foldable, to make them less bulky for transport.

An object of the present invention is to provide an inexpensive, simple, stable tabletop easel which is foldable to a compact configuration for transport.

A further object of the present invention is to provide a tabletop easel that can be constructed of a unitary panel of corrugated paperboard or other types of cardboard or other common, inexpensive material.

SUMMARY OF THE INVENTION

A preferred embodiment of the easel of the present invention is comprised of a left support member, a right support member, a left pedestal member, a right pedestal member and a positioning tab. The left support member is rotatably connected to the right support member in a vertical central joint. A left pedestal member is rotatably connected to the left vertical lower portion of the left support member. Similarly the right pedestal member is rotatably connected to the right vertical lower portion of the right support member. Left edge tapering and right edge tapering, for some preferred embodiments, will be uniform from the left pedestal top and the right pedestal top respectively to the left support member top and the right support member top. These embodiments are particularly suited for displaying flat objects such as pictures, posters and other types of artwork or displays in sheet form. For certain preferred embodiments the pedestal angle between the pedestal top and the tapered outside edge for both the left support member and the right support member will be approximately 90°. The outside edge tapering and the pedestal top slope provide for a stable display of most display items.

When the left support member and right support member are rotated to the desired support angle and the positioning tab is lowered from an unlocked position to a locked position, a selected tab slot in the peripheral edge of the positioning tab rotates onto a tab rib thereby securing the support members at the desired support position with the desired support angle between the left support member and the right support member. The positioning tab is rotatably attached to the left support member or the right support member in a horizontal tab joint. When the positioning tab is in the unlocked position, the tab attached end lies within and conforms to the attachment insert. Similarly, when the left support member and right support member are

aligned in a flat position, the tab free end fits within a receiving insert which is the tab insert opposite the attachment insert. The tab free end is not attached to either support member. This allows the free end to extend rearward behind a support member as the right support member and the left support member are rotated toward a display configuration.

A semi-circular positioning tab with a vertical tab end provides for the free rotation of the positioning tab from the unlocked position to the locked position with the tab free end freely rotating in the receiving insert and the selected tab slot readily rotating onto the tab rib until the positioning tab is in the locked position. The depth of the tab slots is preferably equal to the width of the tab rib, thereby providing additional friction to hold the positioning tab in the locked position. Also the positioning tab can be rectangular or in other geometric shapes. The shape of the tab used and the resultant shape of the receiving insert must provide for clearance of the tab top as it is rotated from the unlocked position to the locked position for the various support angles. The semi-circular design is a preferred embodiment because it provides for adequate clearance between the tab top and the tab insert top regardless of the support angle.

Preferred embodiments may also be provided with a horizontal left panel joint and a horizontal right panel joint which are aligned as they intersect the vertical central joint. For embodiments constructed of corrugated paperboard or other types of material collectively and commonly referred to along with corrugated paperboard as cardboard, these joints may be accomplished by scoring on the back side of the easel material. Depending upon the material used, other suitable hinge means are known in the industry. This allows the left support member top and the right support member top to be rotated downward to a compact configuration, thereby providing a more sturdy configuration for the display of heavier and more compact

materials such as books. It should be noted, however, that in this compact configuration the positioning tab is not used. Other embodiments may also provide for the use of a positioning tab and tab insert at each of the vertical pedestal joints. This provides for additional stability, particularly for displaying heavier display items or very light display items.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a front perspective view of a preferred embodiment of the easel of the present invention in a display configuration with top support member panels in a full display position.

FIG. 2 is a front perspective view of a preferred embodiment of the easel of the present invention in a display configuration with top support member panels in a compact display position.

FIG. 3 is a front view of a preferred embodiment of the easel of the present invention in a flat configuration.

FIG. 4 is a front view perspective of a preferred embodiment of the positioning tab of the present invention in an unlocked position.

FIG. 5 is a front view perspective of a preferred embodiment of the positioning tab of the present invention in a locked position.

DETAILED DESCRIPTION

Referring first to **FIG. 1** the preferred embodiment of the easel **1** of the present invention shown is comprised of a left support member **3**, a right support member **5**, a left pedestal member **7**, a right pedestal member **9** and a positioning tab **11**. The left support member inside edge **13** is rotatably connected to the right support member inside edge **15** in a vertical central joint **17**. The

left support member has a left outside edge **19** which has a left vertical lower portion **21** and a left tapered upper portion **23**. Similarly the right support member has a right outside edge **25** which has a right vertical lower portion **27** and a right tapered upper portion **29**. The left pedestal member inside edge **31** is rotatably connected to the left vertical lower portion in a vertical left pedestal joint **33**. Similarly the right pedestal member inside edge **35** is rotatably connected to the right vertical lower portion in a vertical right pedestal joint **37**. The left edge tapering **39** and the right edge tapering **41**, for some preferred embodiments, will be uniform from the left pedestal top **43** and the right pedestal top **44** respectively to the left support member top **45** and the right support member top **46** as shown in **FIG. 1**. Also for some preferred embodiments the left edge tapering and right edge tapering will be the same. These embodiments are particularly suited for displaying flat objects such as pictures, posters and other types of artwork or displays in sheet form. Also for certain preferred embodiments the pedestal angle **47** between the pedestal top and the tapered outside edge for both the left support member and the right support member will be approximately 90°. The outside edge tapering and the pedestal top slope **49** provide for a stable display of most common sized display boards, posters, charts and similar display items.

Referring now to **FIG. 4** and **FIG. 5** respectively, a preferred embodiment of the positioning tab **11** is shown. In **FIG. 4** the positioning tab is shown in the unlocked position **51**, while in **FIG. 5** the positioning tab is shown in the locked position **53**. Referring also to **FIG. 1**, when the left support member and right support member are rotated to the desired support angle **55** and the positioning tab is lowered from the unlocked position **51** to the locked position **53**, a selected tab slot **57** in the tab peripheral edge **54** is rotated onto the tab rib **58** thereby securing the

support members at the desired support position **59** with the desired support angle **55**. For the embodiment shown the positioning tab is rotatably attached to the right support member in a horizontal tab joint **56**. When the positioning tab is in the unlocked position the tab attached end **60** lies within and conforms to the attachment insert **61** which, for the embodiment shown is the right tab insert **62**.

Similarly, when the left support member and right support member are aligned in a flat position **63** as shown in **FIG. 3**, the tab free end **65** fits within the receiving insert **66** which, for the embodiment shown, is the left tab insert **68** in the left support member adjacent to the vertical central joint **17**. The left tab insert and the right tab insert together form a central tab insert **70**. The tab free end is not attached to the left support member. This allows the free end to extend rearward **69** behind the left support member as the right support member and the left support member are rotated toward a display configuration **71** as shown in **FIG. 1**. For the preferred embodiment of the positioning tab shown in **FIG. 3**, **FIG. 4**, and **FIG. 5**, a semi-circular positioning tab **11** with a vertical tab end **72** provides for the free rotation of the positioning tab from the unlocked position **51** to the locked position **53** with the tab free end freely rotating in the receiving insert and the selected tab slot readily rotating onto the tab rib **58** until the positioning tab is in the locked position **53**. The depth of the tab slots **73** is preferably equal to the tab rib width **75**, thereby providing additional friction to hold the positioning tab in the locked position.

The embodiment of the positioning tab shown in the figures, could readily be reversed with the left end being rotatably attached to the left support member and the tab rib being integral with the right tab insert, i.e. a mirror image of the positioning tab as shown in the figures. Also the positioning tab can be rectangular, oval, triangular or have other geometric shapes. Referring

to **FIG. 4**, the shape of the positioning tab used and the resultant shape of the receiving insert must provide for clearance of the tab top **76** as it is rotated from the unlocked position to the locked position for the various support angles **55**. The semi-circular design shown in the figures is a preferred embodiment because it provides for adequate clearance between the tab top **76** and the tab insert top **78** regardless of the support angle.

Preferred embodiments may also be provided with a horizontal left panel joint **77** and a horizontal right panel joint **79** which are aligned as they intersect the vertical central joint **17** as shown in **FIG.'s 1,2** and **3**. For embodiments constructed of corrugated paperboard or other types of material collectively and commonly referred to along with corrugated paperboard as cardboard, these joints may be accomplished by scoring on the back side of the easel material. Depending upon the material used, suitable hinge material mechanisms are also known in the industry. This allows the left support member top panel **85** and the right support member top panel **87** to be rotated from a full display position **89** as shown in **FIG.'s 1** and **3** downward to a compact configuration **91** as shown in **FIG. 2** thereby providing a more sturdy configuration for the display of heavier and more compact materials such as books. It should be noted, however, that in this compact configuration the positioning tab is not used.

Referring to **FIG. 1**, **FIG. 2** and **FIG. 3**, it will be noted that the vertical central joint **17** and the vertical pedestal joints **33, 37** provide for the alinement of the left support member base **93**, the right support member base **95**, the left pedestal base **97**, and the right pedestal base **99** whether the easel is in a flat configuration or a display configuration, thereby providing a stable base for the easement on a level surface regardless of the support angle **55**.

Other embodiments, particularly in larger sizes, may also provide for the use of a positioning tab and tab insert at each of the vertical pedestal joints. This provides for additional stability, particularly for displaying heavier display items or very light display items.

Other objects, features and advantages of the present invention will become apparent from the preceding detailed description considered in connection with the accompanying drawings. It is to be understood, however, that the drawings and the foregoing description are designed as an illustration only and not as a definition of the limits of the invention. Therefore, the foregoing is intended to be merely illustrative of the invention and the invention is limited only by the following claims.